

Notice of Allowability

Application No.

10/051,830

Examiner

Albert W. Paladini

Applicant(s)

NIU ET AL.

Art Unit

2125

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Application filed on 1/16/02.
2. ☒ The allowed claim(s) is/are 1-42.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3/11,25/02,4/03
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

PD

Reasons for Allowance

1. The following is an examiner's statement of reasons for allowance: None of the references cited or the art searched disclose or teach alone or in combination the method for generating a library of simulated diffraction signals which includes hypothetical layers which characterize a layer within a hypothetical profile, and where each block of hypothetical layer includes two or more hypothetical layers, and where the diffraction calculations generated for the blocks of hypothetical layers are stored, and where diffraction signals are generated based on the stored diffraction calculations for the blocks of hypothetical layers.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Relevant Prior Art

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Dunham (6146032) discloses a method of printing an identification card using overlayer panels where a diffraction grating type image, which previously had to be embossed into the overlaminates, now can be simulated by printing overlayer panel layers and using a second overlaminate. If either printing or special overlaminate manufacturing modulates the printed overlaminate, more reflective edges are created to enhance the security image.

Rovira (6713753) discloses a combination of a normal and oblique polarimeter to provide accurate characterizations of grating structures and discusses etch depth estimation of silicon gratings using multivariate calibration of simulated diffraction profiles.

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3. Niu (6891626) discloses a system and method of generating a library of simulated diffraction signals using hypothetical layers, but does not disclose the methodology including blocks of hypothetical layers wherein each block of hypothetical layer includes two or more hypothetical layers, and where the diffraction calculations generated for the blocks of hypothetical layers are stored, and where diffraction signals are generated based on the stored diffraction calculations for the blocks of hypothetical layers.

McGahan (6898537) discloses a process for modeling diffraction structures which includes an optical model which simulates a diffraction grating under test, where the optical model includes parameters such as layer thickness, grating linewidth, sidewall angle of the grating, and material optical constraints.

4. Any inquiry concerning this communication or earlier communication from the examiner should be direct to Albert W. Paladini whose telephone number is (571) 272-3748. The examiner can normally be reached from 7:00 to 3:00 PM on Monday, Tuesday, Thursday, and Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Leo P. Picard, can be reached on (571) 272-3749. The official fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Albert W. Paladini
Primary Examiner
Art Unit 2125

August 18, 2005